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Norton, H. B.

Geography of the Pacific Coast
region.



Class F 851

Book . N 88

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GEOGRAPHY

OF THE

PACIFIC COAST REGION.

PREPARED EXPRESSLY FOR MONTEITH'S GEOGRAPHY,

BY

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[1880]
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U. S. GEOLOGICAL SURVEY
WASHINGTON



GENERAL AND LOCAL QUESTIONS.

What is the planet called on which we live? **The Earth.** On what Continent do we live? **The Western.** In what country? In what State? In what county? In what city, town, or village?

Mention the name of one or more rivers which you have seen. Lakes. Hills. Mountains. Bays. Islands.

Which is the highest mountain you have seen? What is its height? In what direction is it from you? Point in that direction.

Which is the largest city, town, or village you have seen? Point towards it. How did you go there? What most attracted your attention there? Name some of the largest buildings you ever saw? What can you say about them? Of what materials were they built? How is a railroad built? A bridge? What is a tunnel? A mill? What do you know about mills? About wheat? About corn? About flour? About farming? About mining? About cloth? About leather?

How is this country governed? **By men elected by the people.** What kind of a government is it therefore? **A Republic.** Mention some other republics. **France, Switzerland, Mexico, and most of the Countries in South America.**

What kind of government is that of Great Britain, Prussia, Spain, and most other countries in Europe and Asia? **Monarchy.**

How does a Monarchy differ from a Republic? **The monarch or ruler holds his or her office for life, and is succeeded by a son, daughter, or some other relative.**

What is that city called in which a monarch resides, or in which the laws of a Country or State are made? **The capital.**

What is the metropolis or chief city? **The city which contains the largest number of inhabitants.** What is the capital of your State (or your Territory)? Who is the highest officer in a State or a Territory? **The Governor.** By whom is the governor of a State selected? **By the people.** The governor of a Territory. **By the President and Senate of the United States.**

Stand up and point to the East,—to the West,—to the North,—to the South.

Toward which of these points does your school-house face?

In what direction does the nearest road or street extend? In what direction is your house from the school? The school from your house?

Place your slate upon the table and draw two parallel lines to represent the road or street near your school; next draw a figure representing your school grounds, giving each line its proper direction, and then show where the school-building stands.

MAP QUESTIONS.

What States and Territories lie wholly between the Pacific Ocean and the Rocky Mountains? Which border on the Pacific? On British America? On Mexico?

What parallel of latitude forms the northern boundary of Washington? **The forty-ninth (49° N. Lat.).**

Between which does the Columbia River flow? **The Colorado? The Lewis or Snake?**

What mountains in California? In Oregon? In Washington? In Nevada?

What lakes in Utah? In California? In Nevada? In Oregon? Which is the largest lake in the Pacific Coast Region? Which is the largest lake in California?

Name the two principal rivers in California. In Arizona. One in Nevada. One in Oregon. Three in Washington. Three in Idaho.

What State and Territories lie on both sides of the Rocky Mountains and are drained partly into the Pacific and partly into the Atlantic Ocean?

What large rivers drain the Eastern or Atlantic Slope of Colorado? Of Wyoming? Of Montana? What large river rises in Colorado and flows through New Mexico? What large river with its branches drains the Western or Pacific Slope of Colorado? Of Wyoming? Of Montana? Of New Mexico?

In what directions and on what waters would you sail from San Francisco to Portland? Portland to Seattle? Seattle to Olympia? San Francisco to San Diego?

In what part of what State or Territory are the following places;

Mountains.—Sierra Nevada, Cascade Range, Coast Range, Mt. Whitney, Mt. Shasta, Mt. Lyell, Mt. Hood, Mt. St. Helen's, Humboldt, Blue.

Rivers.—*Tell where they rise, in what directions they flow, and into what waters they flow.*—Columbia, Colorado, Sacramento, San Joaquin, Lewis or Snake, Gila, Humboldt, Clarke's, Salmon, Willamette, Rogue.

Lakes.—Great Salt, Tulare, Pyramid, Walker, Klamath, Utah, Owens, Mud.

Capes.—Mendocino, Conception, Flattery, Blanco, Hancock.

Cities and Towns.—*In California.*—San Francisco, Oakland, Sacramento, San Jose, Marysville, Stockton, Los Angeles, Grass Valley.

In Oregon.—Portland, Salem, Oregon City, Albany, Corvallis.

In Washington.—Walla Walla, Seattle, Olympia, Vancouver, Steilacoom, Port Townsend.

In Nevada.—Virginia City, Carson City, Eureka.

In Utah, Idaho, and Arizona.—Salt Lake City, Boise City, Lewiston, Tucson, Prescott, Yuma City.

1. **The Pacific Coast Region** includes all the States and Territories west of the Rocky Mountains. It comprises nearly one-third of the area of the United States, but contains less than one-twentieth of their population.

2. It is naturally divided into two parts, very unequal in size and very unlike in character.

3. **The larger portion**, which lies between the Rocky Mountains on the east and the Sierra Nevada and Cascade Mountains on the west, is called the **Pacific Plateau or Highland**; it is very high, mountainous, dry, and generally barren. (*See Balloon View on page 25.*)

4. In no considerable portion of the Pacific Plateau, except on the high mountains and in the fertile sections of the upper country in Oregon, Washington, and Idaho, is there ever rain sufficient to cause crops to grow, and in most of this section there is no natural vegetation except the sage-brush, cactus, and other such plants as will live with very little moisture.

5. **In a few localities**, however, especially in portions of Utah and Idaho, sufficient rain falls to support coarse grasses for pasture, and to assist in producing wheat, oats, barley, potatoes, and other food plants. Many of the mountain ridges, also, are well covered with timber, which grows there because much more rain falls on the mountains than in the valleys.

6. **During the winter** great quantities of snow fall on the mountains; this melts during the summer and forms mountain lakes and streams, the waters of which find their way down the mountain sides into the valleys.

7. **Many of these streams** in the northern part of the plateau or highland come together and form the great river **Columbia**, the largest river of the Pacific Coast Region.

8. **In the southern part** a number of small streams unite to form the river **Colorado**.

9. **In the central part** other streams, rising in the mountains, wind about among the ridges

till they emerge into flat, sandy, desert plains, which absorb all their water, and the rivers disappear.

10. **Some of the largest of these rivers** carry so much water that when they reach the plains they spread out and fill the basins into which they flow, but which have no outlet to the ocean. These basins then become lakes, and the water in them is always salt.

11. Although the rivers constantly discharge their waters into them, these lakes never become any deeper, their water evaporates into the dry air, just as the water in a pan will evaporate if set in the sun on a hot summer day.

12. **Great Salt Lake**, in Utah, is the largest in the Pacific Coast Region.

13. **Many of the mountain ridges** of the Pacific Highland are rich in mines of gold and silver.

14. **Some of the richest** of these mines—as the Comstock Silver Mines in Nevada—are situated in the most dry and barren places, where nothing can be made to grow which man or beast will eat.

15. **Many thousands of men** are engaged in working these mines, and all the food which they and their families eat, and everything which they wear or use, has to be carried to them from distant places.

16. As the Pacific Highland will not naturally produce any food-plants, everything which the inhabitants eat would have to be carried to them from the Mississippi Valley or from the Pacific Slope, if it were not for irrigation.

17. **Irrigation** is the artificial watering of land, so as to make it produce crops.

18. When we water our flowers and plants in the garden or in the house, with a common watering-pot, that is **irrigation** on a very small scale. If we had a large field of grain or of potatoes, it would not be possible to give it sufficient water in that way, because it would take so much time.

19. **In these dry regions** men make ditches to conduct the water from lakes and streams in the mountains into the valleys, or wherever there is rich, level land.

20. These ditches are so made that the water, on its way from the mountains, is always kept higher than the land which is to be cultivated; and at each man's farm an opening is made in the ditch, and whenever he thinks his crops need water all he has to do is to open the gate and in an instant the water gushes out and runs down through little trenches all over his land, or just where he pleases. When he thinks his crop has water enough, he just closes the gate and his rain is all over.

21. In this way, wherever there is good land and water in the neighboring mountains or in a stream, excellent crops can be raised, and sometimes two or three crops in one year. Although these ditches and trenches cost a great deal of money, land can be made to produce so much more in this way that farming may sometimes be even more profitable than where men depend upon a natural rainfall.

22. By far the greater part of the Highland, however, is too mountainous, or too barren, or too destitute of water, to produce any food-plants.

23. When we come to study each State, we shall see just where the fertile, irrigated valleys all lie.

24. The smaller portion of the Pacific Coast Region, which lies west of the Sierra Nevada and the Cascade Mountains, is called the **Pacific Slope**.

25. Here, although there are many mountain ridges and some barren places, there are also large areas of rich valley land, with an abundant rainfall. Almost all of this land furnishes excellent pasturage for horses, cattle, and sheep.

26. The **Rocky Mountains** form an absolute barrier to travel, except at a few points called **Passes**. (*See illustration on p. 25.*)

27. By this it is not meant that it is impossible for men to climb over them, although even this may be true for a good portion of their extent, but that it would be so extremely difficult and expensive to make roads over them that it has never been done, and is never likely to be done.

28. No rivers in the United States break through the Rocky Mountains anywhere.

29. The most important pass is that through which the Union Pacific Railroad is built, connecting the Pacific Coast with the Atlantic.

30. On the shore of the Pacific Ocean the mountains come down so uniformly and so close to the sea, that there are but few places where the water can break into the land sufficiently to form basins in which ships can anchor safely in stormy weather.

31. The only good harbors for large ships are in Puget Sound, the mouth of the Columbia, the Bay of San Francisco, and the Bay of San Diego.

32. **SURFACE AND DRAINAGE.**—The Rocky Mountains, the Sierra Nevada and Cascade Mountains are so high that their tops are covered with snow nearly all the year, and there are many peaks in both ranges which reach far above the line of perpetual snow.

33. Noted peaks are Mt. Whitney, over 15,000 feet, and Mt. Shasta, over 14,000 feet, both in California; Mt. Hood, in Oregon; and Pike's Peak, in Colorado.

34. Between the Rocky Mountains and the Sierra Nevada are many smaller ranges, usually running north and south. But few of these small ranges, in the central and southern portion of the Highland, reach high enough to cause much rain to fall upon them.

35. The Wahsatch and the Uintah Mountains are much higher than the other interior ranges, and upon them falls the great body of snow and rain which supplies the water to irrigate and fertilize the valleys of northern and central Utah.

36. North of the Great Salt Lake rises the **Snake River**, which flows into the Columbia.

37. East of the Wahsatch Mountains and south of the Uintah Mountains, various rivers combine to form the **Colorado**.

38. **The Coast Range**, although not nearly so high as the Sierra Nevada and Cascade Mountains, is much nearer the sea, and receives more rain in winter. The mountains of this range in the northern part of the State are densely covered with forests of great trees.

39. In some places these mountains reach down to the ocean, while in other places there is a narrow strip of flat and often very fertile land between them and the sea.

40. **Between the Coast Range and the Sierra Nevadas** lies the great valley of California, in which the rivers Sacramento and San Joaquin collect the waters which flow down from both ranges, and then uniting, carry them into the bay of San Francisco. Further north are the large, low, fertile valley of the Willamette and the smaller valley of Puget Sound.

41. **CLIMATE.** — The climate of the Pacific Coast Region varies greatly in different places. It may be divided into three districts: 1st, **The Coast District**, which includes the Coast Range of mountains and the strip of land west of them; 2d, **The Valley District**, between the Coast Range and the Sierra Nevadas; 3d, **The Highlands**.

42. **The Coast District** has more rain than either of the others, because it is nearest the sea. This district is also nearly as warm in winter as in summer, because in winter the winds generally blow from the southwest, while in summer they generally blow from the northwest.

43. **The Valley District**, in much of its southern part, requires irrigation to produce food-plants. The northern portion has more rain than the southern. Snow seldom falls on the coast, or in the valleys south of Oregon.

44. No irrigation is ever necessary north of San Francisco Bay, except for garden vegetables.

45. **The Valley District** is much hotter in the summer than the Coast District, and is much hotter in the southern part than in the northern.

46. **Sheltered valleys** of California, Oregon, and Washington are covered with spring flowers before the ice and snow of Central and Atlantic States in the same latitudes have even begun to disappear. (*See illustration on page 24.*)

47. **The Highland District** has much less rain than the coast or the valleys, but snow and some rain fall on and near the higher mountains in winter.

48. Throughout the whole Pacific Coast Region there is little rain or snow except in winter; but on the coast and in the north, the rains come earlier and last longer than in the valleys or at the south.

49. **MINERALS.**—Gold, silver, quicksilver, coal and iron, are found in the various mountain ranges.

50. **PLANTS AND ANIMALS.** — In those parts of the Highland which have rain or snow sufficient to support irrigation, and throughout the Pacific Slope, potatoes, wheat, barley, oats, fruits, and in some places Indian corn, grow abundantly.

51. In some portions of the Highland, and in all parts of the Pacific Slope, sufficient rain falls to produce grass. There the buffalo, elk, and deer are rapidly giving place to the cattle, sheep, and horses of the white settlers.





RELIEF MAP SHOWING THE FACE OF THE COUNTRY.

OBSERVE, the Coast Mountains, between which are numerous small valleys, well watered and fertile;—the rich and extensive valleys of the Sacramento and the San Joaquin, which lie east of these mountains;—the Sierra Nevada, which rises like an immense wall, with summits so high and cold as to bring down all or nearly all the rain on its western side and valleys, and to leave little or none for the high lands of Nevada.

SEE how numerous are the streams west of this ridge and in those two great valleys, and that their waters find their way to the Pacific by way of the Bay of San Francisco.

SEE, also, that the few small streams east of it have no access to the ocean, and that they mostly flow into lakes which have no outlets; also, that the mountain ranges in Nevada are short and extend in a northerly and southerly direction.

CALIFORNIA AND NEVADA.



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Eng. by R. D. Servoss, N. Y.

THE HIGHEST MOUNTAIN RANGE shown on this map is the Sierra Nevada.

THE HIGHEST PEAK is Mt. Whitney.

THE LARGEST BAY is San Francisco Bay.

THE LARGEST LAKE is Tulare Lake.

THE LARGEST CITIES in California are San Francisco, Oakland, Sacramento, Los Angeles, and San Jose.

THE LARGEST CITIES in Nevada are Virginia City, Gold Hill, and Carson City.

MAP QUESTIONS.

CALIFORNIA.—In what part of what continent is California? In the western part of the Western Continent.

In what zone is it? **The North Temperate Zone.**

In what country is it? **The United States.**

Into what is the State divided? **Counties.** Which, therefore, is larger, a State or a county?

What does a county contain? **Cities, towns, and villages.**

What can you say of the size of California? **It is twice as large as Kansas.**

Kansas measures 200 by 400 miles and has an area of 80,000 square miles.

Which are the largest States in the Union? **Texas and California.**

What States on the Atlantic side of the United States are in the same latitude and have the same extent from north to south as California? (*See eastern border of the map.*)

What empire of Asia is in the same latitude as California? (*See western border of map.*)

By what is California bounded on the N.? E.? S.? W.?

What ocean washes the western or longest side of California?

What four bays on the coast of California? Which is the largest and most important?

What two large rivers flow into San Francisco Bay? In what part of the State does the Sacramento rise? The San Joaquin? In what directions do they flow?

Into which side does each receive most of its branches? Mention some of the branches of the Sacramento? Of the San Joaquin? Among what mountains do these branches rise?

What two rivers in the northwestern part of the State?

What river in the Colorado Desert? In what part of the State is that desert?

Through what remarkable valley does the Merced River flow?

What two high mountains near the source of the Merced River?

What three high peaks southeast of these? Which is the highest peak in the United States? **Mt Whitney.**

To what mountain range do these high peaks belong?

What lower range extends northwest and southeast between the Pacific Ocean and the Sacramento and San Joaquin rivers?

At what high peak in the north do the Sierra Nevada and the Coast Range meet? In what other part of California do these two ranges meet? What range extends from that point of meeting to the southeastern part of the State? What high peak in this range?

NEVADA.—By what is this State bounded on the N.? E.? S.? W.?

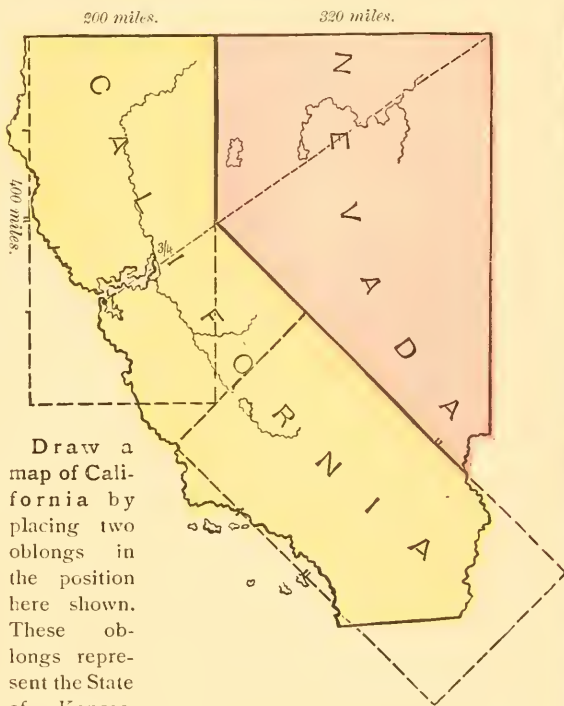
Mention its mountain ranges? In what direction do they extend?

Which is the largest river in Nevada? What is its largest branch?

By what river alone can water from Nevada reach the Pacific?

Into what do all the other rivers flow? **Into lakes or sinks which have no outlet to the ocean.**

Mention the largest lakes and sinks in Nevada? What is the capital of the State? Which is the largest city? Mention the other cities and towns in the State?



which measures about 200 by 400 miles. This association will facilitate map-drawing and aid the memory in retaining a knowledge of distances.

Observe, that the northern boundary almost corresponds with the end of the oblong or of Kansas—200 miles—that the average width of the State is a little more than 200 miles, and that its whole length is about 50 miles less than twice that of Kansas, and that Lake Tulare is about 100 miles from the northern boundary. When its boundaries are drawn, add the mountains, rivers, lakes, and principal cities and towns.

Nevada may be drawn simply by adding its northern and eastern boundaries. Then proceed as directed.

1. **California** is about 750 miles from northwest to southeast. Its average width is about 250 miles. It is almost three times as large as all New England.

2. Its **coast-line** is very smooth, with but few harbors.

3. The **mountains** rise almost directly from the water.

4. The **Sierra Nevada** forms a part of the eastern boundary. The name is Spanish, and means **Snowy Range**.

5. Mt. Whitney, the highest peak, is over 15,000 feet. Mt. Shasta, and some others, are over 14,000 feet high.

6. **Along the western border** extends the Coast Range. This is lower, and the mountains are tilled or pastured to their summits.

7. **Between the two ranges** lies the great level valley drained by the Sacramento and San Joaquin (*san wah-keen'*).

8. **In the southeastern** part of the State is a deep valley or basin, called the Colorado Desert. A small portion of this is called the Death Valley. Much of this region is below the ocean level.

9. **In nearly every part of the State** there are many small and fertile valleys.

10. The **climate** of California is very healthful and pleasant, especially in the region near the sea and in the high mountain valleys.

11. It **resembles** that of Italy, especially along the coast.

12. The southern part of the State has a very dry, hot climate, and no summer rains.

13. There are very few hurricanes or thunderstorms, and snow seldom falls in the valleys.

NOTE.—It would be well to give the pupils, as an oral lesson, some description of the whirlwinds, thunder-storms, and snow-storms of the Eastern States. Usually pupils will be found in the class whose memory of a residence in the east will aid the effort of the teacher.

14. The **largest rivers** are the Sacramento and San Joaquin. Both of these are navigable

by steamers for a considerable distance. They are fed by many large streams rising in the Sierra Nevada.

15. The **Salinas** flows into Monterey Bay, and the **Russian River** and **Klamath** flow into the Pacific.

16. **San Francisco Bay**, **San Diego** (*De-a'-go*) Bay, and **Humboldt Bay** are the principal harbors.

17. **Tulare Lake** is large and shallow; its water is muddy and impure. **Kern Lake** is like it, but smaller. **Lake Mono** is salt and bitter. **Lake Tahoe** is very pure and deep.

18. **Clear Lake** is beautiful, but impure. High up in the Sierras there are many small lakes, fed by the melting snows.

19. **California** produces great quantities of wheat, wool, wine, raisins, honey, beef, and fresh fruits. Most fruits grow better here than elsewhere in the United States.

20. **There are extensive forests** of pine in the mountains, and of redwood along the coast. The "big trees" in Mariposa and Calaveras counties, are the largest in the world.

21. Large quantities of **gold and silver** are mined in the Sierra Nevada. There are also rich mines of **quicksilver** in Santa Clara county, and of various metals in all parts of the State.

22. Many salmon and trout are caught in the rivers.

23. **Yosemite Valley** is one of the wonders of the world. It has been worn in the solid rock by glaciers, or slowly moving rivers of ice. It is about eight miles long and nearly a mile deep. Many streams pour into it, forming wonderful waterfalls. One of these is said to be the highest in the world.

24. The **Geysers** are hot springs near by.

25. Among other **objects of interest** are **Lake Tahoe** and **Mount Shasta**, which are much visited by travelers on account of the beauty of their scenery.

NOTE.—It might be well to give oral lessons to the class concerning Yosemite, Mt. Shasta, gold-mining, and other topics of interest.

26. **The Sacramento Valley** produces most of the wheat. It has a rich, black soil, and the winter rains are usually abundant.

27. **The San Joaquin Valley** has also a fertile soil, but little rain. It is cultivated mainly by irrigation.

28. **Santa Clara, Sonoma, and Russian River valleys**, are fertile and productive.

29. **The mountains of the Coast Range** have a good soil for grass, and vast numbers of sheep and cattle pasture there.

30. There are **beautiful valleys** about Los Angeles, which produce immense quantities of fruit.

31. **The higher mountains** and the south-eastern part of the State, are generally barren.

32. **CITIES AND TOWNS.**—**San Francisco** is the largest city, having a population of over 300,000. It is the great center of commerce for the Pacific Coast.

33. **Oakland** is next to San Francisco in population.

34. **Sacramento** is the capital of the State. The State House and other public buildings are here.

35. **Los Angeles** is the great market for oranges and wine.

36. **San Jose** is a beautiful city in Santa Clara Valley. The State Normal School is here.

37. **Eureka and San Diego** are important seaports.

NEVADA.

1. **Nevada** is a table-land between 4,000 and 5,000 feet in height. It is crossed from north to south by many parallel ranges.

2. **The Humboldt River** flows westward through a somewhat fertile valley, and into the Humboldt and Carson Sink, a shallow, alkaline lake, having no outlet.

3. **The Truckee River** flows from Lake Tahoe into Pyramid Lake.

4. **The Colorado**, on the south, is a large river, flowing through a deep valley.

5. **Lake Tahoe** is high up on the slope of the mountains. It is very clear, pure, and beautiful. Most of the other lakes are shallow and bitter.

6. **The soil** is dry and barren, except in the river-valleys. Crops are raised by irrigation, especially along the Humboldt and Truckee Rivers. Large numbers of cattle and sheep pasture on the plains.

7. **The climate** is almost always dry, with colder winters than those of California. The air is pure and healthful.

8. **Silver** is the most important product of the mines. Gold, salt, borax, sulphur, and other minerals are produced abundantly. The most important silver mine is the Comstock Lode, at Virginia City.

NOTE.—An oral lesson should be given to the class, describing the process of mining and reducing silver ore.

9. **Forests** of pine grow on the slopes of the mountains; but large tracts of country produce only sage-brush and grease-wood.

10. **CITIES AND TOWNS.**—**Carson** is the capital. It is situated in a fertile valley. Here is a mint, where money is coined; the State buildings are also here.

11. **Virginia City and Gold Hill** adjoin each other and have about 25,000 people. They are built upon the Comstock Lode, which was discovered in 1858.

12. **Silver City, Washoe, Dayton, Empire City and Shermantown**, are important mining towns. Reno, Elko, Carlin, and Winnemucca, are on the line of the Central Pacific Railroad.

13. **EDUCATION.**—Nevada has an excellent system of free schools, and all parents and guardians are compelled to send their children to school.

14. **Nevada became a State** in 1864.

VICINITY OF SAN FRANCISCO.



What bay east of San Francisco? Strait north?

What large city on the eastern side of the bay, opposite San Francisco?

What bay north of San Francisco Bay? East of San Pablo Bay?

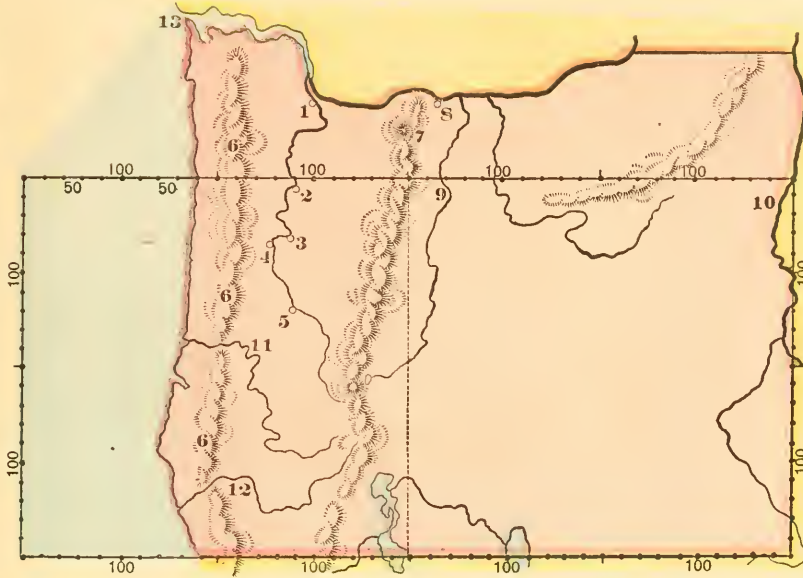
What large river flows south and into Suisun Bay? What large city on the east bank of that river? What river flows into the Sacramento at that city?

What two rivers or creeks flow into the southern part of San

Francisco Bay? What important city between them? What mountain in Contra Costa county? In Marin county? In Alameda county? What three in Santa Clara county?

What important river flows through Sonoma county? Through Napa county?

What is the county seat of Marin county? Of San Joaquin county? Of Napa county? Of Santa Clara county? Of Sonoma county? Of Solano county? Of San Mateo county?



Draw a map of this State on an oblong figure which is composed of two squares, and which represents Kansas in form and size—200 by 400 miles. (See pages 72 and 82.)

The names of the numbered places on this map are given below. Locate them on your drawing and tell where each is situated.

1. PORTLAND.
2. SALEM.
3. ALBANY.
4. CORVALLIS.
5. EUGENE CITY.
6. COAST RANGE.
7. MT. HOOD.
8. DALLES CITY.
9. FALL R.
10. SNAKE OR LEWIS R.
11. UMPQUA R.
12. ROGUE R.
13. COLUMBIA R.

1. Oregon has two principal mountain ranges, the Coast Range and the Cascade Mountains. The latter is the higher. Mt. Hood is the highest peak.

2. Between the two ranges lies the fertile and beautiful Willamette Valley.

3. East of the Cascade Range there is much barren land, but some rich and pleasant plains and valleys.

4. The climate of Oregon is mild and healthful. Along the coast it is very moist in winter. There is some winter snow in the interior valleys, but little summer rain anywhere.

5. The forests of cedar, pine, and other trees are among the finest in the world.

6. Oregon raises large crops of the best wheat and other grains.

7. Apples, pears, and other fruits are abundant and excellent.

8. Grass grows well, and great quantities of beef and wool are produced.

9. Gold, coal, and other mineral products are mined.

10. The Columbia is the largest river. It is navigated almost throughout its entire length.

11. The Snake and Willamette are its most important branches.

12. The Rogue and Umpqua flow into the Pacific, and carry great quantities of lumber to market.

13. The fisheries are valuable. Many salmon are taken in the rivers and canned for export to Europe and the Eastern States.

14. The people are mostly engaged in farming and lumbering. Thousands of immigrants arrive in Oregon every year, to make homes in the unoccupied lands. The State is thus rapidly growing in wealth and population.

15. **CITIES AND TOWNS.**—Portland is the largest city. It is situated on the west side of the Willamette, at the head of ship navigation. It has a large commerce.

16. Salem is the capital. It is a pleasant city in a delightful situation.

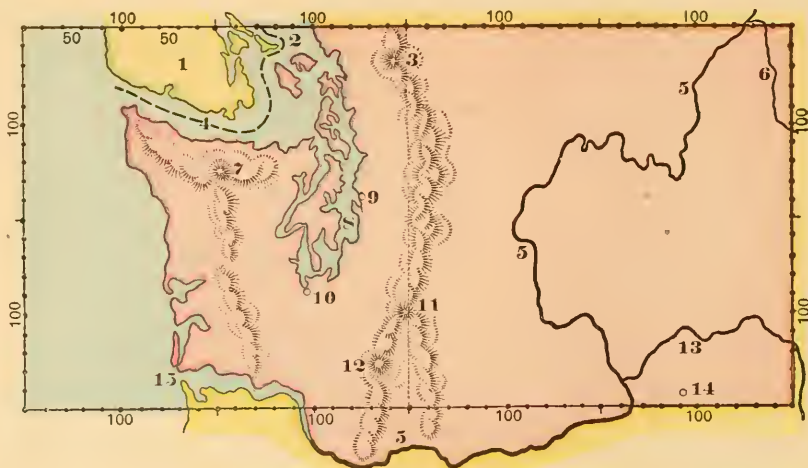
17. Oregon City has great water-power and many mills and factories.

18 Corvallis, Dalles, Eugene City, Astoria, and Jacksonville, are important towns.

Draw a map of Washington as directed on page 93.

The names of the numbered places on this map are given below. Locate them on your drawing and tell where each is situated.

1. VANCOUVER ISLAND.
2. GULF OF GEORGIA.
3. MT. BAKER.
4. STRAIT OF JUAN DE FUCA.
5. COLUMBIA R.
6. CLARKE'S FORK.
7. MT. OLYMPUS.
8. PUGET SOUND.
9. SEATTLE.
10. OLYMPIA.
11. MT. RANIER.
12. MT. ST. HELEN'S.
13. LEWIS OR SNAKE R.
14. WALLA WALLA.
15. MOUTH OF COLUMBIA R.



MAP QUESTIONS.

(See maps on pages 82 and 93, in connection with the above.)

By what is Washington bounded on the N.? E.? S.? W.? By what is Oregon bounded on the N.? E.? S.? W.? What mountain ranges extend through both Oregon and Washington? Name the highest peak in Oregon. In what range is Mt. Hood? Name three high peaks of this range in Washington. What mountain in the northwestern part of Washington?

What three rivers in Oregon between the Coast and the Cascade Range? Which drains the largest valley? What towns on this river? Which of them is the capital? Which the largest? What important Sound in Washington? What towns on Puget Sound? What large town in the southeastern part of the Territory?

What capes on the coast of Oregon? Of Washington? What large British island northwest? What strait between Washington and Vancouver Island?

1. Washington is in the northwestern part of the United States.

2. Its mountains include the Coast Range and the Cascade Mountains. Between them lies the basin of Puget Sound, which has many islands, channels, and harbors. East of the Cascade Mountains is the great plain of the Columbia.

3. Mount Ranier, Mount St. Helen's, and Mount Baker, of the Cascade Range, and Mount Olympus of the Coast Range, are the highest peaks in the Territory.

4. The soil in the valleys is generally fertile.

5. The Walla Walla Region is remarkably beautiful and productive.

6. Splendid forests grow on the lands west of the Cascade Range.

7. Various grains and fruits thrive.

8. Fish are very abundant.

9. The climate is cool and healthful, with abundant rains in winter; but little snow falls in the valleys.

10. The principal rivers are the Columbia, Snake, and Clarke's.

11. Olympia is the capital. Walla Walla and Seattle are the largest towns. Steilacoom, Port Townsend, and Vancouver, are also important.

12. If you should travel across Oregon or Washington eastward from the coast, you would pass over,—first, a narrow strip of land; then, the Coast Range; then, a wide valley or basin containing fine farming and timber lands; then, the Cascade Range, when you are about one-third the way across; and, at last, over a great expanse of higher, dryer land, comprising numerous plains and valleys. (See Relief Map opposite.)

13. The summits of the Cascade Range are so high and, consequently, so cold, that most of the vapor coming from the Pacific is condensed before crossing the range; this is why rain is abundant west of the Cascade Range, and scanty east of it.



Relief Map of Oregon and Washington, showing their Mountains, Rivers, Lakes, Willamette Valley, Puget Sound, Valley, or Basin, the Great Plain of the Columbia, etc.

IDAHO.

1. **Idaho** has generally an elevated and mountainous surface. The Bitter Root and Rocky Mountains are on the east. The western part is traversed by the Snake River.

2. **The climate** is dry, and the winters are not very cold in the valleys. Crops are raised mainly by irrigation. There is abundant wild grass for cattle. Gold is the most important product.

3. **Boise City** is the capital. Lewiston is a river-port, having a large trade with the mines. Idaho City and Silver City are growing towns.

mer, forming large streams of water. These are used for irrigating the valleys.

8. **Crops** of all kinds of grain, vegetables, and fruits of the Temperate Zone, are raised abundantly.

9. **The mines** of gold and silver are of considerable value.

10. **Forests** are scanty, except in the highest mountains. There are large tracts of desert.

11. **The people** mostly belong to the sect called "Latter Day Saints," or Mormons. They are chiefly from America, England, Denmark, and Sweden. By their energy and enterprise they have changed desert places into productive

UTAH.

1. **Utah** is nearly square in form.

2. **It is a table-land** about 5,000 feet in average height, and is divided into two basins by the Wahsatch Mountains, which cross the Territory from the northeast to the southwest.

3. Some of the mountains rise 14,000 feet above the sea-level.

4. On the east side of the range lies the basin of the Colorado, with its two main branches, the Green and the Grand.

5. **The Green and Colorado Rivers** flow through a wonderful cañon some 800 miles long and thousands of feet deep.

6. **Great Salt Lake** is about 40 by 80 miles in extent. The water is very salt and heavy. It is supplied by the Bear and Jordan Rivers. It has no outlet.

7. **The climate** is dry, mild, and healthful. There is but little snow in the valleys. In winter the mountains gather great quantities of snow, which melt in sum-

farms and beautiful gardens. There are some thousands of people of other religions.

12. **Salt Lake City** is large and flourishing. Next in importance are Ogden, Provo, Logan, and Manti.

13. **HISTORY.**—Utah was purchased from Mexico in 1848. It was settled by Mormons the same year, and was organized as a Territory in 1850.

ARIZONA.

1. **Arizona** is a high plain or table-land, crossed by mountains.

2. The two highest peaks, Mounts San Francisco and Bill Williams, rise to the height of about 14,000 feet. The average height of the table-land is some 7,000 feet.

3. **The gorge of the Colorado** is very narrow and several thousand feet deep. The Gila has a broader and more open valley.

4. **The climate** is very dry throughout a large part of the Territory. It is almost everywhere temperate and healthful.

5. Much of the **surface** is bare rock (or alkaline desert), though there is a large area of fertile land along the Gila and the lower Colorado. The northeastern part of the State has extensive grazing lands. There are large forests of pine and other trees on the principal mountain ranges.

6. **Abundant crops** of all the American fruits and grains are grown upon the irrigated lands, and the lower Colorado Valley is especially productive.

7. **Gold, silver,** and nearly all the metals and precious stones abound in Arizona.

8. **The people** consist largely of Indians, including the Apache (*Apatch'-e*), Mohave (*Mohah'-ve*), Zuni (*Zoo'-ne'*), and many other tribes. The Apaches are warlike and cruel. Many of the other tribes have large stone houses, cultivated fields, and herds of domestic animals.

9. **Tucson** (*Took-son'e'*), the former capital, has about 5,000 people. Prescott, the capital, Yuma City, and La Paz, are towns of importance.

10. As soon as the hostile Indians are subdued and settled upon reservations, many millions of acres of land will be occupied and made productive.

11. **Arizona was formerly** a part of Mexico. It was organized as a Territory in 1863.

ALASKA.

(See map of the United States.)

1. **Alaska** includes a portion of the American mainland extending some 1,400 miles along the coast. It also includes a large portion of the Aleutian Islands, and a range of islands skirting the peninsula and the mainland southward.

2. **It is bounded** by the Arctic and Pacific Oceans, Behring Sea, and British America.

3. **The northern portion** of the mainland is a sterile plain, rising along the Arctic coast into a table-land.

4. **The Alaskan Range** extends through the peninsula, and the Coast Range forms a portion of the eastern boundary.

5. **Alaska** has many volcanoes, of which ten are known to be active.

6. **Mount St. Elias** is about 18,000 feet in height.

7. **Its climate** is warmer than that of regions in the same latitude on the eastern coast.

8. **Rains** are copious, and the southwest wind, tempered by the great current of the North Pacific, moderates the intensity of the cold.

9. **Its fertile land** is mostly in the southern part; there grain and vegetables thrive.

10. **Forests** of pine and other trees are extensive.

11. **The Yukon** is its longest river. It is navigable for vessels of light draft over 1,000 miles. There are many rivers and lakes.

12. **Animal life** is very abundant, including salmon, codfish, the seal, walrus, bear, moose, and vast flocks of birds of passage.

13. **Alaska**, formerly called Russian America, was purchased by the United States from Russia.





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